

PATENT ABSTRACTS OF JAPAN

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(54) ELECTRONIC PROGRAM GUIDE DISPLAY PROCESSOR

(57)Abstract:

PROBLEM TO BE SOLVED: To provide an EPG display processor which can display EPG information of programs gathered according to a preference of a user in representation form matching the preference of the user.

SOLUTION: This EPG display processor has user input parts 21 and 24, an EPG processing system 22A which displays EPG by broadcasting wave input 23, and an idea information addition system 25 which provides idea information that the user prefers for the EPG information processing system 22A. The EPG information processing system 22A has a broadcast reception part 260 for the broadcasting wave input 23, an EPG analysis part 250 which analyzes EPG information, a database 240 for the EPG information, an EPG acquisition service part 230A which obtains the EPG information and user's preference information, a display EPG selection part 220 which selects EPG itself or EPG by preference, and an EPG display part 210A which displays EPG on which the preference of the user is reflected.

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CLAIMS

[Claim(s)]

[Claim 1] The program database which is the electronic program guide display processor which displays the electronic program guide according to liking of a viewer, and accumulates a program group in order to guide the program group by many channels for viewers, The detail database which composes and accumulates the outline of initiation and end time of the broadcast, and a program in liking detailed information about the program according to liking of a viewer, Electronic program guide display-processing equipment characterized by having the retrieval display means on which the liking detailed information searched with the detail database by the program which a viewer specifies is displayed with the electronic advice guide of the program.

[Claim 2] Electronic program guide display-processing equipment according to claim 1 which will be characterized by updating the number of selectivity of a program if the program [means / said / retrieval display] according to liking of a viewer is chosen.

[Claim 3] Electronic program guide display-processing equipment given in claims 1 and 2 characterized by what said retrieval display means rearranges in order of a program to a low program with the high number of selectivity which the viewer chose, and displays as each ***** detailed information.

[Claim 4] Electronic program guide display-processing equipment according to claim 1 to 3 characterized by said retrieval display means choosing liking detailed information according to the liking item reflecting a viewer's idea information.

[Claim 5] Electronic program guide display-processing equipment according to claim 1 to 4 with which said retrieval display means is characterized by replacing the display order of two or more searched liking detailed information.

[Claim 6] Electronic program guide display-processing equipment according to claim 1 to 5 characterized by said retrieval display means displaying the liking detailed information of the program which a viewer wants to watch most.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] In case this invention broadcasts various programs by cable television (henceforth CATV), or satellite broadcasting service, it relates to the electronic program guide display-processing equipment by the electronic program guide (Electronic Program Guide) technique using the electronic program guide of these programs.

[0002] Before, the electronic program guide (henceforth EPG) by the electronic program guide is spreading by the multi-channel program, and the EPG display control which applied this EPG technique is known variously.

[0003]

[Description of the Prior Art] Drawing 20 is a block diagram illustrating the electronic program guide display process equipment by the 1 conventional example. This conventional example is electronic program guide display-processing equipment with which the artificer of the invention in this application improved and indicated the EPG display control by the electronic program guide in consideration of the convenience of the viewer (henceforth a user) of a program.

[0004] This electronic program guide display-processing equipment 200 has the EPG processing system 22, the idea information addition systems 25 which manage the newest idea information about EPG, and these user inputs 24 and 21. And the EPG processing system 22 has composition containing the display EPG selection section 220 which displays either on a display 210 from from among these EPG information acquired with the EPG database (EPG-DB) 240 which accumulates the various information about a program, and the EPG acquisition courtesy counter 230 which acquires the usual EPG information and EPG information with liking.

[0005] According to this electronic program guide display-processing equipment 200, the EPG information by which reading appearance was carried out from EPG-DB240 is compared with the newest idea information by the idea information addition system 25 by the EPG acquisition courtesy counter 230. Moreover, the tag of a liking item is given to the EPG information related with idea information based on this comparison result, and it is again accumulated in it at EPG-DB240.

[0006] Thereby, the usual EPG information or the EPG information related with idea information, and one of displays can be chosen by the display EPG selection section 220. And a user can retrieve the EPG information on a program needed with a tag, and can make it display by the EPG display 210.

[0007] In addition, the idea information addition system 25 has the idea information database (idea information DB) 290, the idea Research and Data Processing Department 280, and the idea information creation section 270, and has attached the user input section 21. Moreover, the EPG analysis section 250 and the broadcast receive section 260 are attached to EPG-DB240, and another user input section 24 is attached to it at the display EPG selection section 220.

[0008]

[Problem(s) to be Solved by the Invention] However, the technical problem on the important following techniques which should be solved was shown in the electronic program guide display control by the above-mentioned conventional technique.

[0009] Even if it makes the EPG information related with idea information indicate in the first place by the tag, EPG information and coincidence cannot be made to display the detailed matter beyond it on it about the program of a liking item. That is, there was no means about which a user is told about the detail of the content of a program relevant to a liking item.

[0010] Even if it similarly chooses EPG information as the second and makes it indicate by the tag, selection by the user can give priority to the EPG information on a high program over it, and cannot make it display on it about the program of a liking item. That is, there was no means in which the number of selectivity of a user's liking item is stored up.

[0011] While making the third indicate the EPG information by the tag similarly, even if it has accumulated the detail of the content of a program in it about the program of a liking item, it was meaningless, if a user could not choose these as arbitration or the priority could not be replaced. That is, in this way, it chose and there was no means to replace.

[0012] Even if it has accumulated the detail of the content of a program about the program of a liking item, a user was not able to be made to be able to say to the fourth inevitably from the above thing, and to provide promptly also about the content of a program with the EPG information detailed from the first about the program which a user wants to watch most. It was important to solve associating the technical problem on these techniques synthetically.

[0013] Therefore, the object of this invention is to offer the EPG display-processing equipment which can display the EPG information on the program accumulated according to liking of a user with the expression gestalt doubled with liking of a user.

[0014]

[Means for Solving the Problem] In order to solve the above-mentioned technical problem, the EPG display-processing equipment concerning this invention The program database which is the electronic program guide display processor which displays the electronic program guide according to liking of a viewer, and accumulates a program group in order to show the viewer sense to the program group by many channels, The detail database which composes and accumulates the outline of

initiation and end time of the broadcast, and a program in liking detailed information about the program according to liking of a viewer. It has considered as the configuration which has the retrieval display means on which the liking detailed information searched with the detail database by the program which a viewer specifies is displayed with the electronic advice guide of the program.

[0015] According to this EPG display-processing equipment, detailed information combines about the outline of broadcast initiation of the program reflecting a user's idea information, termination, and the content of a program, and it is provided for a user.

[0016] The EPG display-processing equipment concerning claim 2 of this invention will be characterized by updating the number of selectivity of a program, if the program [means / retrieval display] according to liking of a viewer is chosen. According to this, the EPG information on liking is displayed, updating the number of selectivity by the user about each program.

[0017] As for the EPG display-processing equipment concerning claim 3 of this invention, the retrieval display means is considered as the configuration as which the number of selectivity which the viewer chose rearranges in order of a program to a low high program, and each ***** detailed information is displayed. According to this, liking detailed information is displayed on order with the high number of selectivity.

[0018] The EPG display-processing equipment concerning claim 4 of this invention is considered as the configuration as which a retrieval display means chooses liking detailed information according to the liking item reflecting a viewer's idea information. According to this, liking detailed information is chosen as a user.

[0019] The EPG display-processing equipment concerning claim 5 of this invention is considered as the configuration with which a retrieval display means replaces the display order of two or more searched liking detailed information. According to this, liking detailed information is rearranged by the user.

[0020] The EPG display-processing equipment concerning claim 6 of this invention is considered as the configuration as which a retrieval display means displays the liking detailed information of the program which a viewer wants to watch most. According to this, liking detailed information is promptly displayed by liking of a user.

[0021]

[Embodiment of the Invention] Hereafter, the gestalt of operation by this invention is explained in detail, referring to an accompanying drawing. Drawing 1 is a block diagram illustrating the example of 1 configuration of the EPG display process equipment concerning the first operation gestalt of this invention. This first operation gestalt is EPG display-processing equipment 20 which formed the user input sections 21 and 24, such as a keyboard, and it has the idea information addition system 25 which provides EPG information-processing-system 22A with these, accumulating the idea information by EPG processing-system 22A which displays EPG acquired from the broadcast wave input 23 on a user, and liking of a user.

[0022] EPG information-processing-system 22A has CATV or the broadcast receive section 260 of the broadcast wave input 23 by the transmission line of satellite broadcasting service, the EPG analysis section 250 that analyzes EPG information from the broadcast wave input 23, and the database (henceforth EPG-DB) 240 of the analyzed EPG information.

[0023] furthermore, EPG-DB to EPG information — moreover, the EPG acquisition courtesy counter 230 which acquires idea information from the idea information addition system 25 — A and EPG — it has the display EPG selection section 220 which chooses a display as it is or the display of EPG by liking of a user, and new EPG display 210A which displays EPG in which a user's idea was reflected by the selection result.

[0024] The hardware which consists of a tuner board, a receiving driver, and other circumference circuits is prepared for the broadcast receive section 260, and these upper layers are provided with the receipt information which can process the software of the upper layers, such as the EPG analysis section 250. In the EPG analysis section 250, the receipt information by the broadcast receive section 260 is analyzed, and EPG information is extracted.

[0025] Drawing 2 is drawing illustrating the 1 information format in EPG-DB shown in drawing 1 . A channel number, a program name, a program outline, broadcasting hours, and the information about the existence of Parental Lock are accumulated in EPG-DB240 about the program in a fixed period which continued serially.

[0026] This Parental Lock is a code key into which those parents classify two or more viewing-and-listening permissible levels for minors, and can select adult level, violence level, etc. about each program.

[0027] Drawing 3 is the block diagram of the example of 1 configuration of the EPG acquisition service shown in drawing 1 . This EPG acquisition courtesy counter 230 has the usual EPG information acquisition means 231 for acquiring EPG information from EPG-DB, and the liking EPG information acquisition means 234 for adding to EPG information, acquiring idea information from the idea information addition system 25.

[0028] Usually, the EPG-DB reading means 232 for reading the EPG information which accesses EPG-DB240 and has been accumulated in the EPG information acquisition means 231, and an EPG information storage means 233 to memorize the read EPG information temporarily are established. Moreover, the EPG information on the EPG information storage means 233 is referred by the k liking EPG information acquisition means 234.

[0029] For a liking EPG information acquisition means 234, it has the idea information carrier hand hold stage 235 for receiving the idea information by liking of a user, a liking information comparison means 236 collate the content of the received idea information with the content of EPG information, and the EPG information-storage means 237 with liking that composes EPG information with liking by the collating

result, and memorize temporarily from the idea Research and Data Processing Department 280 of an idea information addition system 25.

[0030] The display EPG selection section 220 chooses the usual EPG display or the EPG display with liking including the content of a detail of idea information, and one of displays, accessing the EPG information storage means 233 and the EPG information storage means 237 with liking.

[0031] Drawing 4 is the block diagram of the example of 1 configuration of EPG display 210A shown in drawing 1 . This EPG display 210A has a liking sequence count means 205 to count the sequence of a user's liking information, a liking information judging means 206 to choose the display gestalt of liking by the user, and the EPG display 207 with liking that displays EPG with liking with the selected display gestalt. [0032] Furthermore, a count are recording means 211 for display setting out by which the set point used as the criteria of whenever [user's liking] was held is put side by side for the liking information judging means 206. Moreover, it has the usual EPG display 208 which displays usual EPG.

[0033] Drawing 5 is drawing which is shown in drawing 4 and which usually illustrated the example of 1 display of an EPG display. A channel number is shown on the axis of ordinate of a display screen, time amount progress is shown on an axis of abscissa, and the time sharing of each program is displayed on this example of a display about each channel number.

[0034] Drawing 6 is drawing illustrating the example of 1 display of an EPG display with liking shown in drawing 4 . The tag is given to each EPG and EPG with liking which can add EPG of liking with these tags is displayed on this example of a display.

[0035] Drawing 7 is drawing illustrating the example of 1 display of Liking EPG shown in drawing 4 . The information about the program group specified with a tag is added to this example of a display, and the liking EPG by the user is displayed on it.

[0036] Again, the idea information addition system 25 is described, referring to drawing 1 . The idea information database (henceforth the idea information DB) 290 which accumulates the idea information by liking of a user, the idea Research and Data Processing Department 280 which manages the idea information on this idea information DB290, and the idea information creation section 270 for creating idea information by the user input section 21 are formed in the idea information addition system 25.

[0037] The idea information creation section 270 is performed in the broadcast wave receiving software which a user uses. By this broadcast wave receiving software, if each program is chosen while being able to perform each setting out of the program by which a user is contained in EPG information in the idea information creation section 270, a retrieval item, a genre, and Parental Lock, that count of selection counts and a user's idea information is created.

[0038] The idea Research and Data Processing Department 280 is provided with the idea information created by liking of a user in order, and the newest idea information

is accumulated in the idea information DB290. These four setting-out items are examples, and there is no limit in the number.

[0039] In the idea Research and Data Processing Department 280, while performing idea information creation operation by the user and building the idea information DB, whenever idea information is inputted from the idea information creation section 270, the information within the idea information DB290 is updated. Simultaneously, the newest idea information can provide now for EPG acquisition courtesy counter 230A.

[0040] Drawing 8 is drawing illustrating the 1 information format within the idea information DB290 shown in drawing 1. A user's newest idea information is accumulated in the idea information DB290 through the idea Research and Data Processing Department 280.

[0041] Then, the operation in the first operation gestalt is explained. Drawing 9 is a flow chart which is shown in drawing 4 and which usually contains an example of the display operation by the EPG display. First, PAKETAIZU processing is done by the broadcast receive section 260, and the received broadcast wave input 23 is changed into an usable information format by the upper layer containing the EPG information analysis section 250 (Step1).

[0042] Next, to the data which carried out PAKETAIZU processing in the broadcast receive section 260, analysis is performed by the EPG information analysis section 250, and EPG information is extracted (Step2).

[0043] Then, the channel number of a program, a program name, a program outline, broadcasting hours, and Parental Lock information are accumulated from the extracted EPG information by EPG-DB240 (Step3).

[0044] In EPG acquisition courtesy counter 230A, the program name of a program [finishing / are recording] etc. is read in EPG-DB240 by the EPG information acquisition means 232, and the these-acquired program name is stored temporarily for the EPG information storage means 233 (Step4).

[0045] Then, if the display by EPG usual in the display EPG selection section 220 is chosen, setting out which reveals the display using EPG information with liking will be made, reading appearance only of the EPG information usually memorized by the EPG information storage means 233 will be carried out, and this will usually be displayed by the EPG display 208 (Step10).

[0046] Drawing 9 is a flow chart containing an example of the display operation by the EPG display with liking shown in drawing 4. On this display operation, Step1-Step4 which were mentioned above are usually performed like the display operation by the EPG display 208.

[0047] Then, when the display using EPG information with liking is chosen by the display EPG selection section 220, the idea information by liking of a user is received from the idea Research and Data Processing Department 280 by the idea information carrier hand hold stage 235 with liking of the (Step5) liking EPG information acquisition means 234 (Step6).

[0048] Then, with the liking information comparison means 236, collating the EPG information memorized by the EPG information storage means 233 and the received idea information on liking, the EPG information which agreed with this idea information is extracted, the content of idea information is added to EPG information, and it memorizes for the EPG storage means 237 with liking (Step7).

[0049] If presenting of EPG information with liking is chosen in the display EPG selection section 220, reading appearance of the EPG information with liking information memorized for the EPG storage means 237 with liking of EPG acquisition courtesy counter 230A will be carried out, and it will be introduced into EPG display 210A.

[0050] This counts the count as which liking information was chosen with the liking sequence count means 205. And while the counted count of selection is compared with the predetermined number of the count are recording means 211 for display setting out by the liking information judging means 206, the display gestalt using EPG information with liking is chosen. (Step9) .

[0051] From the comparison result, if the count of selection is larger than a predetermined number, the detailed information of the EPG information with liking will be displayed by the EPG display 207 with liking regardless of assignment by the user. However, when the count of selection of EPG information with liking is smaller than a predetermined number, this detailed information is displayed by assignment of a user.

[0052] moreover, when a user specifies only the display by EPG with liking with a liking information judging means, the display gestalt only using EPG information with liking is chosen, and only EPG information with liking is reading appearance from the EPG storage means 237 with liking -- it is carried out and this is displayed by the EPG display 207 with liking. (Step10) .

[0053] However, if the display by the detailed information of liking EPG information is specified, the display gestalt using all the EPG information with liking will be chosen, and the display using the EPG information with liking that detailed information was added will be performed (Step10).

[0054] Next, one example by the first operation gestalt is explained. Drawing 10 is drawing illustrating the example of 1 display of the display EPG selection section shown in drawing 1 . In this example of a display, each distinguishing mark column of "it is usually EPG" and "EPG with liking" is displayed in the display EPG selection section 220. A user can specify either of these two distinguishing mark columns.

[0055] Drawing 11 is drawing illustrating the example of 1 display of the liking information judging means shown in drawing 4 . In this example of a display, each distinguishing mark column "EPG" and "with liking detailed information" is expressed as the liking information judging means. A user can specify either of these two distinguishing mark columns.

[0056] Drawing 12 and drawing 13 are drawings illustrating two examples of a display of EPG with liking (Step10A) shown in drawing 9 . In the example of a display shown in

drawing 12 , in the example of a display which is made to display EPG with liking behind usual EPG, and is shown in drawing 13 , EPG with liking is piled up on usual EPG, and only the piece is attached and displayed, respectively.

[0057] The element of liking is displayed on the tag of each example of a display like "Kimu-taku", and highlighting of the figure of a channel number is carried out to it about the channel number relevant to "Kimu-taku." Moreover, the outline of initiation and end time of a program, and the content of a program is displayed in the direction of the back from this side by order with many counts of an appearance of "Kimu-taku."

[0058] Furthermore, with the liking information judging means 206, when the count of selection of EPG information with liking is smaller than a predetermined number, highlighting or when you make it shown a blink table and a user specifies by a mouse click, key input, etc., the detailed information of the EPG information with liking is displayed for the distinguishing mark column a "detail."

[0059] Drawing 14 is drawing illustrating one example of the information format within the idea information DB shown in drawing 1 . Using this idea information DB290, "Kimu-taku" is specified as a retrieval item name, and the information to which retrieval was carried out only once to the corresponding idea information is shown.

[0060] That is, since it means that the user showed interest about this "Kimu-taku", the idea information which contains 1 time as the character string "Kimu-taku", and a count of selection is received from the idea information DB290 with the idea information acquisition means 235 with liking.

[0061] And with the liking information comparison means 236, it collates with the EPG information memorized by the EPG information storage means 233, the EPG information to which the retrieval item name agreed with the character string "Kimu-taku" is extracted, and the character string "Kimu-taku" of the received idea information is memorized by the EPG storage means 237 with liking.

[0062] Using the EPG information related to these "Kimu-taku", and liking detailed information, the EPG display 210 is performed and additional processing of liking EPG information and additional processing of detailed information are performed. And the EPG information with liking created for the idea information of "Kimu-taku" of liking by the user is usually piled up with EPG information, and is displayed.

[0063] In this case, in EPG display 210A, if the predetermined number of the count are recording means 211 for display setting out is 0 times, since 1 time by "Kimu-taku" of the count of selection is larger, the detailed information of the EPG information with liking relevant to "Kimu-taku" is promptly displayed with liking EPG information. Moreover, if a predetermined number becomes twice or more, only the EPG information with liking on the program relevant to "Kimu-taku" will be displayed.

[0064] Drawing 15 is a block diagram illustrating the example of 1 configuration of another new EPG display by the 2nd operation gestalt concerning this invention. To EPG display 210A by the 1st operation gestalt, attached the liking invagination means

212 to the liking information judging means 206, and this another EPG display 210B attached the invagination storage means 213 to the EPG display 207 with liking, and also is the same as that of the 1st operation gestalt.

[0065] The liking invagination means 212 is a means to take the AND of two or more idea information depended on liking of a user, and to compute the number which should create detailed information about each EPG information with ***** which corresponds only using each idea information by this AND again, respectively. The invagination storage means 213 is a means to memorize the creation number computed with the liking invagination means 212.

[0066] According to these liking invagination means 212 and the invagination storage means 213, based on the creation number of the invagination storage means 213, the detailed information of the EPG information with liking on a predetermined number can be made to be able to input into the display 207 with liking, and can be displayed.

[0067] Then, the operation by the 2nd operation gestalt is explained. Drawing 16 is drawing illustrating an example of the content of information within the idea information DB in the 2nd operation gestalt. To the retrieval item name of "Kimu-taku", once, to the retrieval item of "*****", retrieval is performed only twice and the information the user indicated interest to be to these retrieval items is shown from this content of information.

[0068] For this reason, in EPG display 210A, additional processing of the liking EPG to EPG usual by the liking EPG display 207 is performed using the EPG information related to "Kimu-taku" and "*****" which were memorized for the EPG storage means 237 with liking.

[0069] First, Parental Lock in the idea information offered by the liking sequence count means 205 An element has priority over EPG with liking, and usual EPG, and is displayed. Next, while displaying the EPG information with liking on the predetermined number mentioned above, the sequence added to the display is judged and it is made to provide for the liking EPG display 207 about "Kimu-taku" and "*****."

[0070] Drawing 17 is drawing illustrating the example of 1 display of a liking EPG display shown in drawing 15. In this example of a display, two EPG with liking is created using the idea information of "Kimu-taku" and "*****", and it arranges at the tooth back of usual EPG, and all are piled up and it has displayed.

[0071] "Kimu-taku" and "*****" are displayed on each tag, and highlighting of each figure is carried out to it about the channel number relevant to "Kimu-taku" and "*****."

[0072] Drawing 18 is drawing illustrating another example of 1 display of a liking EPG display shown in drawing 15. About the detailed information of EPG information with liking, the detailed information searched by overlapping and the detailed information searched by any one are displayed to "Kimu-taku" of a retrieval item and "*****" by the user.

[0073] In this case, the display order of each detailed information can make it able to

display most on this side about a retrieval item "***** and Kimu-taku", can make it able to display in the direction of the back in order about a retrieval item "*****" and "Kimu-taku" after this, and can display detailed information about all the combination of a retrieval item.

[0074] next, the 3rd operation gestalt ***** explanation concerning this invention -- it carries out. Drawing 19 is the block diagram which illustrated the example of 1 configuration of another new EPG display to the pan by the 3rd operation gestalt concerning this invention. Another EPG display 210C to this pan attached the invagination sort means 214 to the EPG display 207 with liking further to EPG display 210B by the 2nd operation gestalt, and also is the same as that of the 2nd operation gestalt.

[0075] The invagination sort means 214 is a means to display the detailed information which sorts the program applicable to idea information and is related by the count of selection memorized for the invagination storage means 213, when the idea information by liking of a user overlaps.

[0076] According to another EPG display 210C to this pan, the detailed information of EPG information with liking is inputted into the liking EPG display 207 by that sort result, and the outline of initiation and end time of a program, and the content of a program is set in order by a user's count of selection in each detailed information, for example, it is made to display on order with many counts of selection with the invagination sort means 214.

[0077]

[Effect of the Invention] As mentioned above, since there is a means on which the detailed information by liking of a user is displayed by tag retrieval according to the EPG display-processing equipment concerning this invention as stated to the detail, detailed information, such as an outline of broadcast initiation and end time of the searched program, and the content of a program, is simultaneously displayed with EPG information. Therefore, the EPG display-processing equipment which can display the EPG information on the program accumulated according to liking of a user with the expression gestalt doubled with liking of a user can be offered.

[0078] Such detailed information can be displayed in order about a low thing from the idea information that second the number of selectivity by liking of a user is high. Each detailed information can be chosen as each **, and the display order can also be changed to the third. Priority can be given to the program which a user wants to watch most, and it can show [fourth].

[Brief Description of the Drawings]

[Drawing 1] The block diagram illustrating the example of 1 configuration of the EPG display process equipment concerning the first operation gestalt of this invention.

[Drawing 2] Drawing illustrating the 1 information format in EPG-DB shown in drawing 1 .

[Drawing 3] The block diagram of the example of 1 configuration of the EPG acquisition service shown in drawing 1 .

[Drawing 4] The block diagram of the example of 1 configuration of EPG display 210A shown in drawing 1 .

[Drawing 5] Drawing which is shown in drawing 4 and which usually illustrated the example of 1 display of an EPG display.

[Drawing 6] Drawing illustrating the example of 1 display of an EPG display with liking shown in drawing 4 .

[Drawing 7] Drawing illustrating the example of 1 display of Liking EPG shown in drawing 4 .

[Drawing 8] Drawing illustrating the 1 information format within the idea information DB290 shown in drawing 1 .

[Drawing 9] The flow chart of an example of the display operation shown in drawing 4 usually according to an EPG display.

[Drawing 10] Drawing illustrating the example of 1 display of the display EPG selection section shown in drawing 1 .

[Drawing 11] Drawing illustrating the example of 1 display of the liking information judging means shown in drawing 4 .

[Drawing 12] Drawing illustrating two examples of a display of EPG with liking (Step10A) shown in drawing 9 .

[Drawing 13] Drawing illustrating two examples of a display of EPG with liking (Step10A) shown in drawing 9 .

[Drawing 14] Drawing illustrating one example of the information format within the idea information DB shown in drawing 1 .

[Drawing 15] The block diagram illustrating the example of 1 configuration of another new EPG display by the 2nd operation gestalt concerning this invention.

[Drawing 16] Drawing illustrating an example of the content of information within the idea information DB in the 2nd operation gestalt.

[Drawing 17] Drawing illustrating the example of 1 display of a liking EPG display shown in drawing 15 .

[Drawing 18] Drawing illustrating another example of 1 display of a liking EPG display shown in drawing 15 .

[Drawing 19] The block diagram which illustrated the example of 1 configuration of another new EPG display to the pan by the 3rd operation gestalt concerning this invention.

[Drawing 20] The block diagram illustrating the electronic program guide display

process equipment by the 1 conventional example.

[Description of Notations]

20 EPG Display-Processing Equipment

21 24 User input section

22A EPG processing system

23 Broadcast Wave Input

25 Idea Information Addition System

210A EPG display

220 Display EPG Selection Section

230A EPG acquisition service

240 Database of EPG Information (EPG-DB)

250 EPG Analysis Section

260 Broadcast Receive Section
